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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,795	02/24/2004	Vieri Vanghi	040003	3351

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QUALCOMM INCORPORATED
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EXAMINER

PORTIS, SHANTELL L

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/16/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.		Applicant(s)	
	10/786,795		VANGHI ET AL.	
	Examiner		Art Unit	
	Shantell Portis		2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: "and" should be changed to "wherein". Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7-13, 15, 18, 20-27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Singh et al. (Singh), U.S. Publication No. 2003/0139184.

Regarding Claims 1, 13, 15, 18, 27 and 29, Singh discloses a wireless device operable to communicate with first and second wireless communication networks of different radio access technologies, comprising: a first modem processor (**inherent in a device capable of performing handover functions; [0032]**) operative to perform processing for a pending call with the first wireless network, receive a first message from the first wireless network to perform handoff to the second wireless network, and provide notification of the handoff (**the GSM RAT (first network), currently serving UE 6, sends a "Inter System Handover to UTRAN (second network) Command" message which includes description on the handover command to UMTS; [0050] and [0051]**); and a second modem processor (**inherent in a device capable of performing handover functions; [0032]**) operative to exchange a second message

with the second wireless network to establish a new call with the second wireless network, perform a call setup procedure with the second wireless network to establish the new call, and perform processing for the new call with the second wireless network **(the UE sends the message to UMTS, UMTS sends a message to PHY 10 for setting up a physical layer, once this has been done successfully the UE receives a “UMTS Phy Configuration Confirm” message; [0053]-[0056]).**

Regarding Claims 2 and 18, Singh discloses further comprising: an application processor **(inherent in a device capable of performing handover functions; [0032])** operative to receive the notification from the first modem processor **(the UE receives the “Inter System Handover to UTRAN Command” message; [0050]),** direct the second modem processor to establish the new call **(the UE sends the message to UMTS; [0053]),** and direct the first modem processor to release the pending call **(the GSM becomes a null state and UMTS becomes a dedicated state; [0058]).**

Regarding Claim 3, Singh discloses wherein the application processor is operative to direct the first modem processor to release the pending call concurrently with the establishment of the new call or shortly after the new call has been established to minimize disruption of service **(once the “RAT Change Complete Indication” message is received, application and transmissions are resumed to the current RAT environment; [0026], [0027] and [0057]).**

Regarding Claim 7, Singh discloses wherein the pending and new calls are voice calls **(voice packets are transmitted once a RAT environment has changed; [0057] and [0082]).**

Regarding Claim 8, Singh discloses wherein the first modem processor is operative to maintain a first protocol stack (**GSM stack**) for communication with the first wireless network and the second modem processor is operative to maintain a second protocol stack (**UMTS stack**) for communication with the second wireless network (**the first and second protocol stacks are maintained until a successful change is made; [0026] and [0027]**).

Regarding Claim 9, Singh discloses wherein the second modem processor is operative to perform pilot re-acquisition and cell search, as necessary, obtain updated system information, and perform system access for the second wireless network to establish the new call (**the UE writes a measurement report based on the data collected from monitoring neighboring cells; [0032] and [0033]**).

Regarding Claim 10, Singh discloses wherein operable to communicate with the first and second wireless networks simultaneously (**to perform a soft handoff, the UE communicates with both first and second networks simultaneously until a confirmation message is received of the RAT change; [0026], [0027] and [0053]-[0058]**).

Regarding Claim 11, Singh discloses wherein the handoff is triggered by the first wireless network based on measurements obtained by the wireless device (**the BSS 3 evaluates the reported measurements; [0050]**).

Regarding Claim 12, Singh discloses wherein the handoff is triggered by the first wireless network based on location information for the wireless device (**the UE 6 moves from GSM coverage to UMTS coverage; [0050]**).

Regarding Claim 20, Singh discloses wherein the first modem processor is further operative to receive from the first wireless network a second message carrying a list of frequencies to search for cells in the second wireless network, and to send to the first wireless network a third message carrying search results for the list of frequencies **(the measurement report is sent to BSS 3)**, and wherein the second modem processor is further operative to perform pilot acquisition and cell search for the list of frequencies and to provide the search results **(the UE writes a measurement report based on the data collected from monitoring neighboring cells; [0032], [0033] and [0050])**.

Regarding Claim 21, Singh discloses wherein the first message from the first wireless network includes information for one or more target cells in the second wireless network to which the wireless device is handed off **(the MSC 2 makes evaluations on the handover based on the measurement results; [0033] and [0050])**.

Regarding Claim 22, Singh discloses wherein the one or more target cells are determined by the first wireless network based on search results from the second modem processor for a list of frequencies in the second wireless network **(see rejection for claim 21)**.

Regarding Claim 23, Singh discloses wherein the second modem processor is further operative to send a second message to the second wireless network indicating successful completion of the handoff to the second wireless network **(UMTS RRC 28 in**

UE sends a "Handover to UTRAN Complete" message to UTRAN 5 (second network); [0056]).

Regarding Claim 24, Singh discloses wherein the first modem processor is operative to autonomously terminate the pending call with the first wireless network after providing the notification of the handoff **(once the confirmation message is received, the GSM layers are reset and the GSM RR 18 of UE becomes a null state; [0056]-[0058]).**

Regarding Claim 25, Singh discloses wherein the application processor is further operative to direct the first modem processor to terminate the pending call with the first wireless network **(see rejection for claim 24).**

Regarding Claim 26, Singh discloses wherein the first wireless network terminates the pending call based on signaling between the first and second wireless networks **(see rejection for claim 24).**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6, 14, 16, 17, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh in view of Patel et al. (Patel), U.S. Publication No.

2004/0203469.

Regarding Claims 4, 14, 16, 19 and 28, Singh discloses wherein the first wireless network implements Wideband Code Division Multiple Access (W-CDMA) as described above (see paragraphs [0024], [0026] and [0028]).

Singh fails to disclose wherein the second wireless network implements IS-2000.

In a similar field of endeavor, Patel discloses a method of reducing latency for non-call delivery paging. Patel further discloses wherein the second wireless network implements IS-2000 [0022].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network [0007].

Regarding Claim 5, Singh discloses the wireless device as described above.

Singh fails to disclose wherein the second modem processor is operative to perform a mobile terminated (MT) call setup procedure defined by IS-2000, and wherein the second message is a General Page Message sent by the second wireless network.

Patel discloses a mobile terminated (MT) call setup procedure defined by IS-2000, and wherein the message is a General Page Message sent by the wireless network [0022].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where

different radio access technologies are covered allowing for calls to be maintained and set up on the existing network [0007].

Regarding Claim 6, Singh discloses the wireless device as described above.

Singh fails to disclose wherein the second modem processor is operative to perform a mobile originated (MO) call setup procedure defined by IS-2000, and wherein the second message is an Origination Message sent to the second wireless network.

Patel discloses a mobile originated (MO) call setup procedure defined by IS-2000, and wherein the message is an Origination Message sent to the wireless network [0030].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network [0007].

Regarding Claim 17, Singh discloses a UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network (UTRAN) comprising: means for processing a pending call with a wireless device; means for sending a first message to the wireless device to perform a handoff to a radio access network (RAN); means for sending a second message to a UMTS mobile switching center (MSC) to request relocation of the wireless device to another MSC in the RAN; means for receiving an indication of a new call established for the wireless device with the RAN;

and means for terminating the pending call with the wireless device as described above (see paragraphs [0069]-[0071]).

Singh fails to disclose wherein the radio access network is a cdma 2000.

Patel discloses wherein the radio access network is a cdma 2000 [0022].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network [0007].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantell Portis whose telephone number is 571-272-0886. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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